

AGRICULTURALISTS

Agriculturalists

Agronomists

Chemists, agricultural

Economists, agricultural

Engineers, agricultural

Forestry Specialists

 Conservation

 Wood processing (milling, impregnating, etc.)

 Wood products (lumber, turpentine, etc.)

Animal Husbandmen

 Products and technology, dairy

 Products and technology, bone and hoof, hide, meat and poultry

Veterinarians

 Biology and control of parasites (other than arthropods) of vertebrates

 Disease pathology and treatment

 Fungus diseases

BACTERIOLOGISTS

Bacteriologists (including Viral and Rickettsial Diseases)

 Classification of viruses, bacteria and rickettsia

 Industrial bacteriology

 Disinfectants and antiseptics

 Infectious diseases of man, biology and control of pathogenic agents

 Bacterial and rickettsial

 Viral

 Unknown etiology

 Infectious diseases of vertebrates other than man, control of pathogens

 Bacterial and rickettsial

 Viral

 Unknown etiology

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BACTERIOLOGISTS (Cont'd)

Infectious diseases of plants, biology and control of pathogenic agents

Bacterial

Viral

Unknown etiology

BIOLOGISTS

Biologists

Anatomy, cytology, embryology, histology, microscopy and morphology

Genetics

Microbiology

Physiology

BIOLOGICAL WARFARE SPECIALISTS

Biological Warfare Specialists

Dissemination techniques

Biologic agents (insects and other hosts)

Mechanical (plane spraying, smokes, etc.)

Water (natural and artificial systems)

Pathogenic biological agents and by-products

Protection against biological warfare

Biological (immunization, etc.)

Chemical

Physical (protective clothing, masks, etc.)

Research and development

Tactics and strategy

BOTANISTS

Botanists

Anatomy, cytology, embryology, histology, microscopy and morphology

Genetics

Physiology (growth hormones, photosynthesis, etc.)

Zymotechnology (organisms, techniques & products of fermentation processes)

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ENTOMOLOGISTS

Entomologists (including medically important arthropods)

Fungus diseases of arthropods

Life history and control of insects and arthropods affecting:

Construction materials

Crops, field, forest and horticultural

Man

Manufactured non-food products

Plants (unspecified)

Stored food products

Vertebrates other than man

Control and testing techniques

Insects parasitic on invertebrates including other insects

Taxonomy of arthropods (insects, ticks, mites, spiders, centipedes, etc.)

Toxicity and pathogenicity of insecticides, miticides, etc., to man

Transmission of plant and animal pathogens

PARASITOLOGISTS

Parasitologists

Biology and control of invertebrates parasitic on man:

Protozoa (ameba, flagellates, ciliates; malaria, sleeping sickness, etc.)

Nemathelminthes (hookworms, pinworms, trichina, filariasis, etc.)

Platyhelminthes (flukes, tapeworms, etc.)

Parasites of man not otherwise classified

Control and therapeutics

Parasite identification techniques (staining, microscopy, precipitation tests)

Transmission of parasites

PLANT PATHOLOGISTS and MYCOLOGISTS

Plant Pathologists and Mycologists (Plant diseases and fungi)

Biology of fungi other than bacteria:

Slime fungi - Myxomycetes

Algal fungi - Phycomyctes (downy mildews, bread molds, molds on insects, etc.)

Sac fungi - Ascomycetes (powdery mildews, blue-green molds, yeasts, etc.)

Basidium-forming fungi-basidiomycetes (rusts, smuts; fleshy and woody fungi)

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PLANT PATHOLOGISTS and MYCOLOGISTS (Cont'd)

Life history and control of fungi affecting:

Construction materials

Crops, field, forest and horticultural

Man

Manufactured non-food products

Plants (unspecified)

Stored food products

Vertebrates other than man

Control and testing techniques

Taxonomy of the fungi

Toxicity and pathogenicity of fungicides to man

Transmission of plant pathogens

ZOOLOGISTS

Zoologists

Experimental physiology of the functional systems

Circulatory

Digestive

Endocrine (Hormones)

Excretory

Muscular

Nervous and special senses

Reproductive

Respiratory

Skeletal

Skin

Genetics

MEDICAL RESEARCHERS and PRACTITIONERS

Physicians (anat., physiology, prophylaxis, therapeutics of functional systems)

Circulatory (cardiology, haematology)

Digestive (gastroenterology, nutrition and dietary, proctology)

Endocrine (endocrinology)

Muscular

Nervous and special senses excluding sight

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MEDICAL RESEARCHERS and PRACTITIONERS (Cont'd)

Physicians (cont'd)

Reproductive (embryology, gynecology, obstetrics)

Respiratory (laryngology, rhinology, bronchoscopy)

Skeletal excluding dentistry (osteology)

Skin (dermatology)

Medical Specialists

Allergy

Arctic medicine

Aviation medicine

Cancer

Gerontology

Plastic surgery

Radioactive induced diseases and therapy

Tropical medicine

Medical Service Specialists

Anesthesiology

Radiology and roentgenology (X-Ray, radium therapy)

Public Health Specialists

Administration

Epidemiology

Food poisoning

Industrial Hygiene

Industrial Toxicology

Toxicology

Sanitary or Public Health Engineers

Sewage treatment and disposal systems

Water treatment, filtration supply systems, testing, etc.

Dentists

Immunologists and Serologists

Complement-fixation methodology

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MEDICAL RESEARCHERS and PRACTITIONERS (Cont'd)

Immunologists and Serologists (cont'd)

Immunization and vaccination

Serums and vaccines, preparation and storage

Ophthalmologists

Pharmacologists

Antibiotics (Chloromycetin, penicillin, streptomycin, sulfonamides, etc.)

Antimalarial drugs

Drugs affecting the nervous system

Drugs affecting the cardiovascular system

Drugs affecting the excretory system

Drugs affecting growth and metabolism

Drugs affecting muscle tonus

Drugs affecting the reproductive system

Drugs affecting parasites

Drugs & pharmaceuticals derived from animals, plants, chem. synthesis

Pharmaceutical chemistry

Toxicology of drugs and medicines

Psychologists and Psychiatrists

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CERAMICS and GLASS TECHNICIANS

Ceramics and glass technicians

Earthenware and porcelains

Glass - pressed, blown and flat

Structural clay products

METALLURGICAL ENGINEERS

Metallurgical engineers

Process metallurgy (extraction of metals from their ores)

Concentration (ore dressing, crushing, flotation, benefaction)

Electrometallurgy (electrolytic separation)

Fuel technology (use of fuels in metallurgical processing)

Hydrometallurgy (leaching)

Metallurgical smoke (recovery from smoke by-products)

Pyrometallurgy, ferrous and non-ferrous (smelting, roasting, sintering, etc.)

Physical metallurgy (treatment, fabrication of metals after extraction)

Foundry

Heat treatment (furnace design, construction, refractories)

Mill fabrication

Surface finishing

Thermoanalysis

Metals and alloys, metallurgy

Ferrous metals

Non-ferrous metals

Uranium, thorium and related elements

MECHANICAL ENGINEERS

Mechanical engineers

Engines, automotive (design, construction and testing)

Aircraft

Amphibious craft

Automobile, bus, truck

Diesel

Gas turbine

Gasoline

Jet

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MECHANICAL ENGINEERS (Cont'd)

Ram jet

Reciprocating

Rocket

Steam

Engines and motors, stationary (design, construction and testing)

Diesel engines, parts and accessories

Gasoline engines, parts and accessories

Gravity and spring powered motors (clocks, etc.)

Hydraulic engines and equipment

Pneumatic engines and equipment

Steam engines and equipment

Heating, refrigeration, air conditioning, plumbing

Air conditioning

Heating

Refrigeration

AERONAUTICAL ENGINEERS

Aeronautical engineers

Aerodynamics (fluid motion, air flow, wind tunnel expers., Phy.-Mech., gas, etc.)

Air navigation

Airports and airways (including aircraft carriers)

Braking systems, tires and landing equipment

Communication methods and equipment

Design and structuring (supports, covering, welding, stress, load, etc.)

Fire protection

Gliders and towed engineless craft

Helicopters (rotating wing aircraft)

Hydraulic control equipment

Instruments, engine

Instruments, (navigation and flight)

Jet assist takeoff equipment

Lighter than aircraft (balloons, dirigibles, etc.)

Parachutes and escape devices

Propellers (air screws)

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AERONAUTICAL ENGINEERS (Cont'd)

Pumps

Structure and surface composition (fabrics, wood, metal and plastic)

Supersonic engineering

Transonic engineering

Ultrasonic engineering

AUTOMOTIVE ENGINEERS

Automotive engineers (other than Aeronautical and Marine)

Amphibious vehicles (ducks, weasels, amphibious tanks, etc.)

Automobiles

Tanks and halftracks (other than amphibious)

Tractors

MARINE ENGINEERS and NAVAL ARCHITECTS

Marine Engineers and Naval Architects

Corrosion, fouling and protection (machinery, ship bottoms, etc.)

Marine engines, design, installation, etc.

Navigation and stabilization equipment

Steam turbines and steam engine auxiliaries

Submarines

Warships and auxiliary craft (battleships, destroyers, landing craft)

ORDNANCE and ARMAMENT ENGINEERS (all phases)

Ordnance and armament engineers

Ammunition, artillery, naval mounted rifles, etc.

Ammunition, small arms

Armor and penetration

Atomic bomb, design and production

Atomic bomb, fusing and detonation

Automatic weapons

Ballistics, external, internal and terminal

Bomb design and production,

Bomb fusing

Cartridge design

Demolition and detonation

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ORDNANCE and ARMAMENT ENGINEERS (Cont'd)

Explosives, chemistry
Explosives, physical properties
Fire control systems
Fuses
Fuses, automatic, proximity fuses, etc.
Guns and mounts
Mines, land
Mines, naval
Projectiles
Propellants other than explosives
Pyrotechnics
Rockets, not guided
Small arms
Underwater ordnance
Warheads

GUIDED MISSILES SPECIALISTS

Guided missiles specialists (all phases)
Airborne and underwater (including projectiles and bombs)
Control surfaces
Counter measures
Guidance systems
Propulsion engines
Propulsion fuels
Remote control
Servo mechanisms
Structure and design
Telemetering systems
Tracking, detection, interception

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ASTRONOMERS

Astronomers

Astrophysics & descriptive astronomy (Physical condition of bodies in space)

Geodetic astronomy (time, latitude, longitude, triangulation, navigation)

CHEMICAL WARFARE SPECIALISTS

Chemical warfare specialists (all phases)

Chemical toxicants (other than biological)

Gases

Liquid contact vesicants

Radioactivated compounds

Stomach poisons

Dissemination techniques

Protection against chemical warfare agents including detection and warning

CHEMISTS

Chemists

Biochemists

Fermentation processing in chemical production

Nutritional (food and vitamin chemistry, analysis, assay, etc.)

Physiological (cellular chem., metabolism of carbohydrates, proteins, etc.)

Industrial chemists and chemical engineers

Coal and coal products

Commercial solvents

Explosives, including atomic bomb

Fuels

Lubricants

Oils, fats, waxes and soaps

Paints, enamels, varnishes

Photographic chemicals

Pigments

Metals and their inorganic compounds

Alkali and alkaline earth metals

Aluminum and magnesium and compounds

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CHEMISTS (Cont'd)

Beryllium and compounds
Iron, cobalt, nickel and compounds
Lead, tin, antimony and compounds
Platinum, ruthenium, osmium and compounds
Precious metals and compounds
Zinc, cadmium, mercury and compounds
Zirconium and compounds
Nonmetals and their inorganic compounds excluding acids
Halogens and compounds
Inert gases
Nitrogen and compounds, ammonium, etc.
Oxygen
Phosphorus
Rare earths
Sulphur and compounds
Nuclear chemists (radio chemistry)
Analysis of radioactive material
Graphite purification
Plutonium and compounds
Radioactive elements, compounds
Radium and compounds
Redox processes
Thorium and compounds
Tracer chemistry, production, etc.
Transuranium elements
Uranium and compounds, oxides, tetrafluorides, etc.
Organic chemistry
Alcohols, aldehydes, ketones, ethers, acids and acid derivatives
Heterocyclic compounds (purines, quinolines, alkaloids)
Nonheterocyclic nitrogen compounds (nitro, diazo, amino derivatives, proteins)
Organometallic compounds
Physical chemistry
Catalysis
Chemical equilibria (homo-and hetero-systems, phase rule, etc.)

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CHEMISTS (Cont'd)

Chemical kinetics and mechanisms of chemical reactions
Colloids and surface phenomena
Crystals
Electrochemistry (batteries, electroplating, etc.)
High pressure reactions
High temperature reactions
Photochemistry (effect of light on chemical reactions)
Polymers and polymerization
Separations excluding radioactive isotopes
Solutions (aqueous, electronic forces, ionic equilibria, viscosity)
Theoretical chemistry (quantum theory, applications, etc.)
Thermochemistry (effect of heat on chemical reactions)

GEOGRAPHERS

Geographer
Cartography
Commercial and economic geography (dist. of products, demand, exchange)
Exploration
Geopolitics (origin, evolution and distribution of nat'l polit. doctrines)
Human (political) Geography (dist. of human races)
Topography, coastal & inland features (configurations, trans., towns, etc.)

GEOLOGISTS

Geologists
Economic geologist (detection, estimation)
Coal
Geophysical prospecting
Metals and non-metals (other than uranium, thorium & related compounds)
Petroleum and natural gas
Uranium and related compounds
Geophysicists (dynamics of the earth and dynamic geology)
Seismology (earthquakes, storms, etc.)
Terrestrial magnetism
Ground water geology

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GEOLOGISTS (Cont'd)

Mineralogists (descriptive and analytical)

Mining geologists and engineers

Surface and underground plants

Systems and methods of working mines (surface and underground)

Petroleum and natural gas engineers

Drilling equipment and methods

Gas flow control

Oil field hydrology (exclusion of water from wells)

Pneumatic pumping and mechanical pumping

Refining techniques

Structural geology - Geotectonics (manner earth materials put together)

MATHEMATICIANS

Mathematicians

Ballistics

Biometrics

Cryptoanalysis

Electronic computers

METEOROLOGISTS

Meteorologists (Science of the atmosphere) all phases

Climatology

Composition of the atmosphere and stratosphere

Physical and dynamic meteorology

Weather forecasting

PHYSICISTS

Physicists

Biophysicists

Electrical engineers

Communications

Generators (dYNAMOS AND AUXILIARIES)

Motors and electric power driven machinery

Power distribution

Telegraphy

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Telephony

PHYSICISTS (Cont'd)

Electricity (experimental) and Magnetism

Dielectrics and capacitance

Ionization

Magnetism (materials; induced, etc.)

Piezoelectricity

Electronics Specialists

Frequency modulation and low and high frequency phenomena

Infrared

Ionization, photoelectric thermal

Remote control and guidance systems

Servomechanisms

Sound reproduction and recording

Telemetering

Transmitting and receiving instruments and components

Radar

Radio

Sonar

Television

Vacuum tubes & gaseous tubes (diodes, multigrid tubes, amplifiers, rectifiers)

Waves, microwaves, etc.

Heat

High and low temperature effects and phenomena

Temperature measurement and instruments

Thermodynamics (conduction, convection, radiation)

Light

Photography

Polarized light

Optics and propagation of light

Spectroscopy, wave length and analysis measurements

Mechanics and weights and measures

Fluids, gases and liquids (statics and dynamics)

Solids (gases and dynamics)

Nuclear physicists

Cosmic rays

Crystallography

Detection & measurement instruments, radioactivity

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PHYSICISTS (Cont'd)

Nuclear Physicists (cont'd)

Electron ballistics

Particles (alpha, beta, deuterons, mesons, neutrons, protons)

Theoretical nuclear physics

Nuclear engineers

Atomic bomb

Design, construction and maintenance

Fission products

Generators of high velocity particles

Heat transfer

Isotopes, separation identification and production (magnetic, thermodiffusion)

Pile operation

Radiation shielding for health protection

Sound

Acoustics

Sound waves

Supersonics

Ultrasonics

Underwater sound

TAB

C

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Estimate of Unbudgeted Expenses Required to Produce Soviet Men of Science

1. It is estimated that the production of Soviet Men of Science will require the expenditure of \$27,071 in voucherized funds as follows:

a. Personnel

2 clerks, GS-5, @ \$3100 per annum	\$ 6,200.00
4 clerks, GS-4, @ 2875 per annum	11,500.00
Total	\$ 17,700.00

b. Printing (500 copies)

composition, lock-up, make-ready	8,772.00
production, paper, running, binding	599.00
(each additional hundred copies - \$120.00) Total	\$9,371.00

Grand Total \$27,071.00

2. Printing costs in b., above, are as stated by [redacted] 25X1A5A1 Washington printer, according to specification set forth in Tab B. The usual 10% profit has not been included. It is believed that the quotation of the [redacted] at competitive rates less profit is a good estimate of the cost to the Government Printing Office which will probably job out the work.

3. No expenses other than those outlined in paragraph 1 are foreseen. Equipment in use in the Biographic Register and supplies stocked by CIA should be sufficient for the receipt and preparation of data.

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